IN THE SPECIFICATION

Please amend the specification as follows:

Delete the paragraph on page 3, line 3 of the specification.

Replace the paragraph on page 4, between lines 5-9 of the specification with the following:

In ~~an~~ one embodiment ~~as defined in claim 3~~, the position is determined by calculating: the inverse sine (by applying the arcsine function) of the amplitude corrected sine component to obtain the amplitude of the sine component, the inverse cosine (by applying the arccosine function) of the amplitude corrected cosine component to obtain the amplitude of the cosine component, and summing these two amplitude values.

Replace the paragraph on page 4, between lines 10-20 of the specification with the following:

In another embodiment ~~as defined in claim 4~~, before the sum is calculated, first, the amplitudes of the cosine and sine component

are weighted. The weighting factors or functions are selected to favor the cosine and sine component around their zero crossings. Thus, the weighting factor for the cosine or sine component has value around the zero crossings of the cosine or sine component which is larger than its value around the peaks of the cosine or sine component. For example, the weighting function is $1-\cos^2 x$ or $1-\sin^2 x$ for the cosine or sine component, respectively. This weighting has the advantage that the parts of the cosine or sine component where the sensitivity to the position variation is largest are favored. Thus, the weighting function suppresses the peaks of the cosine and sine component which are less sensitive to the position variation and do not suppress the steep slopes around the zero crossings.

Replace the paragraph on page 5, between lines 7-21 of the specification with the following:

Fig. 1 shows a mechanism which converts a rotating movement into a linear movement and which comprises sensors for supplying position information. The motor M has a rotor which rotates the shaft AX when the motor is energized. The rotor is inside the motor

housing and thus is not shown. Usually, in an optical drive, the shaft AX is connected to a gearbox which decreases the rotating speed of the rotor to a desired rotating speed of an outgoing axis. The gearbox may further comprise a construction for converting the rotating speed of the outgoing axis to a linear movement of an optical pickup unit. In ~~Fig. 1 a~~ Fig. 1, a simplified gearbox is shown. This gearbox comprises a disc shaped member DM attached to the shaft AX. A side wall of the disc shaped member DM is pushed against a rod shaped element which is or is part of the optical unit OPU. The practical implementation of the gearbox is not relevant to the invention and may have any suitable construction which is able to convert the rotating movement of the shaft AX connected to the rotor into a linear movement of the optical unit OPU. Although is referred to the optical unit which is used in an optical disc drive to cooperate which an optical disc, this unit may also be a magnetical unit cooperating with a magnetical storage medium.